

MISSOURI DEPARTMENT OF CONSERVATION



January/February 2020

XY
G
W

BOING!

SOME ANIMALS TAKE
LEAPING TO NEW LENGTHS



CONTENTS

FEATURES

6 Winter Camping

Learn how to turn a snow day into a snowy sleepover.

10 Hoppy Leap Year!

We're jumping into this extra-long year by celebrating Missouri's bounciest critters.

DEPARTMENTS

- 2 Get Out!
- 3 What Is It?
- 4 Into the Wild
- 16 Predator vs. Prey
- 17 Strange but True
- 18 How To
- 20 Xplor More

Pillows of snow fluff up the rocks in a stream at Three Creeks Conservation Area near Columbia.

by Noppadol Paothong

CONSERVATION COMMISSION

Don C. Bedell
Steven D. Harrison
Mark L. McHenry
Wm. L. (Barry) Orscheln

DIRECTOR
Sara Parker Pauley

XPLOR STAFF

Bonnie Chasteen
Les Fortenberry
Angie Daly Morfeld
Noppadol Paothong
Marci Porter
Mark Raithel
Laura Scheuler
Matt Seek
David Stonner
Stephanie Thurber
Cliff White

Xplor (ISSN 2151-8351) is published bimonthly. It is a publication of the Missouri Department of Conservation, 2901 West Truman Boulevard, Jefferson City, MO (Mailing address: PO Box 180, Jefferson City, MO 65102.) Subscription free to Missouri residents (one per household); out of state \$5 per year; out of country \$8 per year. Please allow 6-8 weeks for first issue. Notification of address change must include both old and new address (send mailing label with the subscriber number on it) with 60-day notice. Preferred periodical postage paid at Jefferson City, Missouri, and at additional entry offices. **Postmaster:** Send correspondence to *Xplor Circulation*, PO Box 180, Jefferson City, MO 65102-0180. Phone: 573-751-4115, ext. 3856 or 3249.

Copyright © 2019 by the Conservation Commission of the State of Missouri. Vol. 11, No. 1. January/February 2020 issue printed by LSC Communications in December 2019 in Liberty, Missouri. Printed in the USA.

Send editorial comments to: **Mailing address:** *Xplor Magazine*, PO Box 180, Jefferson City, MO 65102-0180; **Email:** *Xplor@mdc.mo.gov*. **Please note:** *Xplor* does not accept unsolicited article queries, manuscripts, photographs, or artwork. Any unsolicited material sent will not be returned.

Equal opportunity to participate in and benefit from programs of the Missouri Department of Conservation is available to all individuals without regard to their race, color, religion, national origin, sex, ancestry, age, sexual orientation, veteran status, or disability. Questions should be directed to the Department of Conservation, PO Box 180, Jefferson City, MO 65102, 573-751-4115 (voice) or 800-735-2966 (TTY), or to Chief, Public Civil Rights, Office of Civil Rights, U.S. Department of the Interior, 1849 C Street, NW, Washington, D.C. 20240.



We recycle.
You can, too! Share
Xplor with friends.

ON THE COVER

Red Fox

by © Ondřej Prosický | Dreamstime.com

GET OUT!

FUN THINGS TO DO
AND GREAT PLACES
TO DISCOVER NATURE



CHECK THE WOODS FOR CHIPMUNKS. They come out of hibernation in late February.



WHO'S BEEN EATING THOSE SAPLINGS?
Deer leave a ragged cut. Cottontails leave a neat 45-degree angle.



GREEN UP THE GLOOM OF WINTER. Watercress grows cheerfully green around springs all winter long.



WHITE PELICANS IN MISSOURI?

You bet! They gather on open water.



Take a walk in the snowy, sunny woods.

YOU MIGHT SPOT SOME SNOW FLEAS!



SPOTTED SALAMANDERS ARE ON THE MOVE IN LATE FEBRUARY.
Who knew?!

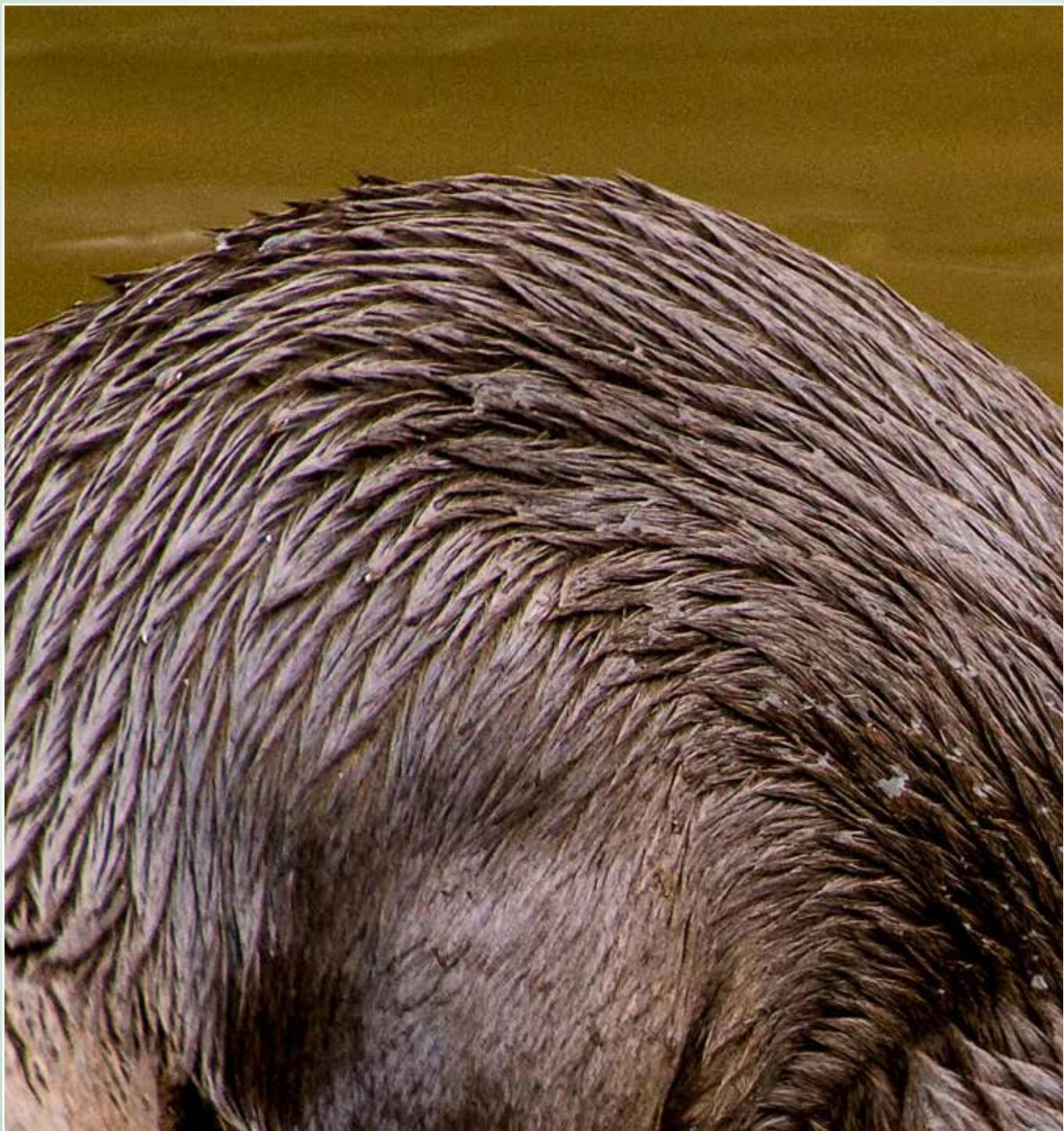
Watercress up close: Shaun Winterton Aquarium and Pond Plants of the World, Edition 3, USDA APHIS PPQ, Bugwood.org

Show flea: Tom Murray / CC BY-ND-NC 1.0;
Show flea pile: ©DeepspaceDave | Dreamstime.com

WHAT IS IT?

DON'T KNOW?

Jump to Page 20 to find out.



- ❶ I'm covered in fur and thick layers of fat.
- ❷ I hunt underwater with my family at night.

- ❸ In winter, we swim after all kinds of fish.
- ❹ Then we take time to play on the snow and the ice.

Into the Wild frozen pond



Missouri's most dazzling duck, the **wood duck**, nests in hollow trees, abandoned woodpecker holes, and **human-made nest boxes**. Winter is a great time to set up wood duck boxes near tree-lined ponds. For plans, fly over to audubon.org/news/how-build-wood-duck-nest-box.



Under a blanket of ice, a frozen pond teems with life.

Heads Up!

Never, ever play on an icy pond unless an adult says it's OK. Ice that isn't at least 4 inches thick isn't safe to walk on.



Take a Closer Look

Peer through clear ice at the edge of a pond, and you may see aquatic insects swimming around in the chilly water. Look for backswimmers, predaceous diving beetles, and whirligig beetles.



What Happened Here?

A wild picnic took place beside this pond. Raccoons, mink, or muskrats pried open **mussels** to munch on the meat inside. Then they tossed the empty shells up on the bank.



LOOK

Watch for sparrows wandering around weedy shorelines searching for seeds to snack on. How many of these little brown birds can you find?



Take a Closer Look

It takes 11 to 14 months for **bullfrog tadpoles** to turn into frogs. That means the chubby polliwogs spend winter underwater. If you're lucky, you might spot some swimming lazily under clear ice.



Luckily for fish and other aquatic creatures, ice forms from the top down on a pond, not from the bottom up. Unless the pond freezes completely, there's a layer of warmer water under the roof of ice.



Painted turtles spend winter buried in mud at the bottom of ponds. They survive by absorbing oxygen through a part of their bodies scientists call the cloaca (*cloe-ay-kuh*). Most people have another name for this body part: rear end.



LOOK

American mink prowl pond edges looking for fish, rabbits, and rodents to eat. You probably won't see the mink itself, but you might find its paw prints, which are about the size of quarters.





WINTER CAMPING

It's snow much fun!

by Bonnie Chasteen

Turn a snow day into a snowy sleepover. All you need is the right gear, one or two willing adults, and your BFF.

Start With a Plan

Don't wait until the snow flies to start your adventure. Tell your folks you'd like to try winter camping, and see if your bestie would like to join you. Then keep an eye on the weather, and give your crew the heads-up a few days in advance. That way, everyone has a chance to get ready and gather for the big day (and night!).

GATHER YOUR GEAR

Chances are good that Missouri will get snow in January or February. To make the most of what may be only a day or two of frozen fun, build your winter camping kit now. That way, you'll be ready to roost outside at the first sign of snow.



Essential

Tent Get one that's waterproof and has a floor. Nothing spoils snow camping like a leaky roof or a soggy sleeping area. It also helps to get a tent that's easy to put up, especially if the sun goes down while you're trying to make camp. Tents that have shock-corded or connected poles are easier to work with than those you have to fit together. For attaching the poles to the tent, clips or J-hooks are easier to use than pole sleeves.



Sleeping pad and bag A sleeping pad not only protects you from lumpy rocks and roots, but it also helps keep you warm. An inflatable, insulated pad is best, but two foam pads stacked together will work, too. For winter camping, it's best to use a sleeping bag that's rated colder than the temperature you'll be sleeping in. Average minimum temperatures for Missouri range from 12 to 24 degrees Fahrenheit. A bag rated -20 should keep you warm.

Choose a sleeping bag made of synthetic material and filled with down feathers or synthetic down. Avoid cotton sleeping bags for winter camping. Cotton is poor insulation, and it will draw heat from your body if it gets wet.

Flashlight You'll want a flashlight (with fresh batteries) if you need to go to the bathroom in the middle of the night. A flashlight also comes in handy for making scary faces when you're telling ghost stories after dark.

Optional

Camp stove and cooking pot

For making hot chocolate

Handsaw or hatchet

For cutting up firewood branches

Pocketknife

For whittling marshmallow sticks



Pro tip

Synthetic base layers are good choices for winter camping. Cotton undies and jammies can give you a chill, especially if they get wet.

Pro Tip

Take your boots off BEFORE you crawl inside the tent. Once inside, knock off the snow outside the tent door, and bring your boots inside before zipping up.

Set up Camp and Gather Firewood

Pitch your tent on a flat area with the door pointing toward the house. That makes it easier to get to the bathroom when you need to. Arrange your sleeping pads and bags so they're easy to slip into. Lastly, hang a flashlight from the tent's center loop so the light shines right where you need it.

Build a Fire or Light Your Camp Stove

This is where a grown-up really comes in handy. Build your fire or light your stove a safe distance from the tent. If the snow is patchy, and the grass is dry — don't build a fire! Grass fires can spread quickly. Plan B may include bringing hot chocolate and treats from the kitchen.

Have S'More Fun

What's a campout without campfire treats?! Ask your grown-up to help you make hot chocolate and s'mores to warm you up for a night of winter camping. Once inside the tent, you and your bestie can play games, tell stories, or open the rain fly and look at the stars. It's your first snowy sleepover, so have fun!

Pro Tip

Wet socks and gloves? Just tuck them into the bottom of your sleeping bag. If they're made of wool or synthetic fiber, your body heat will dry them by morning.



HOPPY LEAP YEAR!

by
Matt Seek

2020

is a leap year. That means February will have 29 days instead of 28. To celebrate all those extra hours — 24 to be exact — we're looking at critters that take leaping to new lengths. Ready? Let's jump right in!

MOVING Around

Many animals leap to get from place to place.

Dashing Deer

White-tailed deer bound around in low, graceful leaps, throwing in higher jumps ever so often to get a better look. When they need to hoof it, they can bounce about at speeds up to 36 mph for 4 miles at a stretch. Getting over obstacles isn't a problem, either. When needed, deer can hop more than 8 feet into the air.

Forest Flyer

To get from tree to tree, a flying squirrel climbs up high, leaps into the air, and spreads its legs like your crazy uncle doing a belly-buster at the pool. Unlike your uncle, however, the squirrel doesn't go splat. Draped between its wrists and ankles is a flap of skin that billows like a furry parachute. By steering with its long tail, the squirrelly skydiver can swoop around branches and sail safely to its destination.



Philip Dalton / Alamy Stock Photo



Bouncy Mouse

When going about its day-to-day business, a meadow jumping mouse rarely hops farther than 6 inches at a time. But when the mouse needs to scurry in a hurry, it uses its large hind paws to leap up to 12 feet in a single bound. If a predator is in pursuit, the mouse zigzags between jumps, which makes it almost impossible to catch.

Can you find the jumping spider in these photos?



CATCHING Prey



Leaping comes in handy when you're hungry.

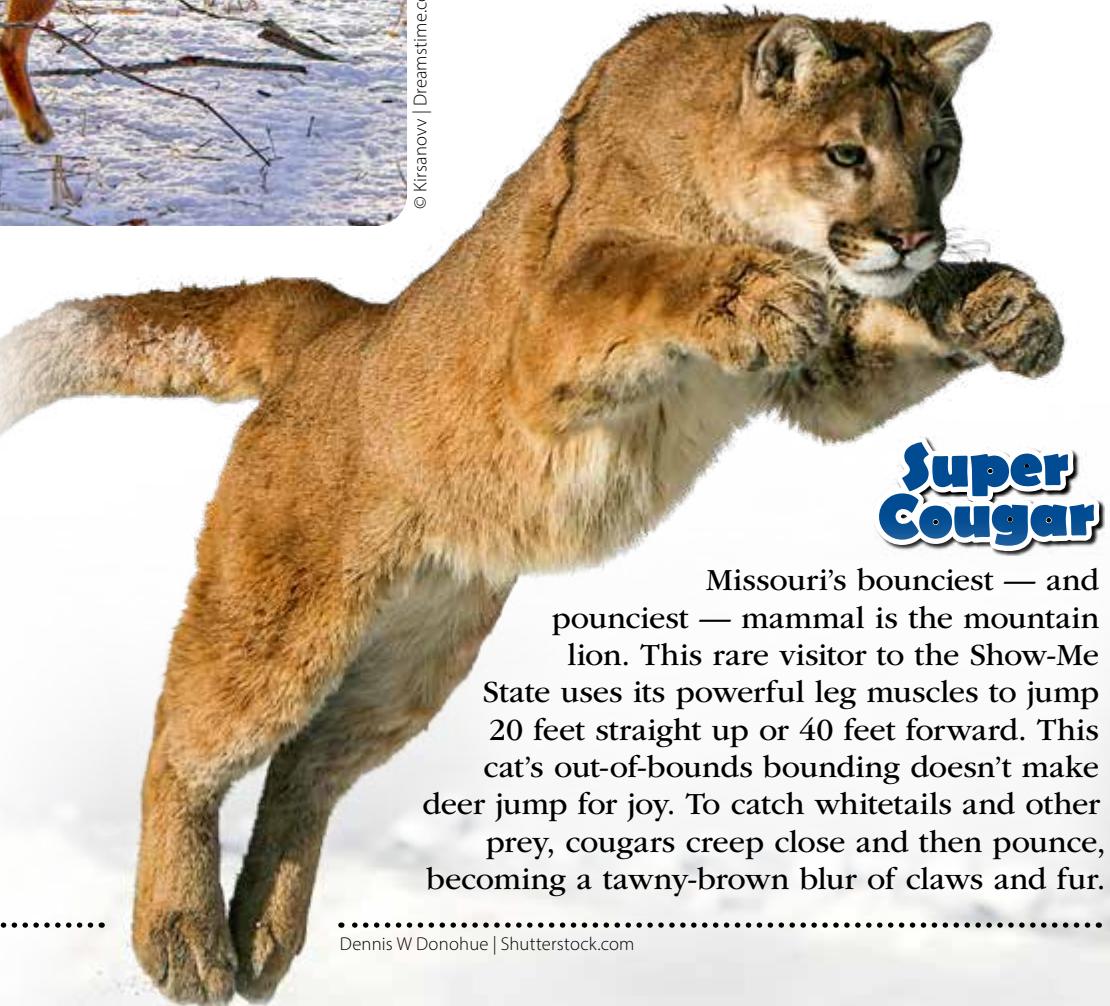
Lethal Leap

Red foxes have superhero hearing. Need proof? A fox's oversized ears can pinpoint a vole rustling under the snow from 100 feet away. When the crimson canine detects such a yummy morsel, it can leap the length of a living room and dive headfirst into the snow to snap up the snack.

Spring-Loaded Spider

A jumping spider's spring comes not from strong muscles but from jetting blood into its back legs. This causes them to — *spring!* — push out quickly. Most jumpers don't spin webs, but they do make silk. It's used to anchor a spider's backside to a surface before the spider springs into space. The silk acts like a lifeline, so a jumper can climb to safety if it misses its mark.

© Kirsanov | Dreamstime.com



Missouri's bounciest — and pounciest — mammal is the mountain lion. This rare visitor to the Show-Me State uses its powerful leg muscles to jump 20 feet straight up or 40 feet forward. This cat's out-of-bounds bounding doesn't make deer jump for joy. To catch whitetails and other prey, cougars creep close and then pounce, becoming a tawny-brown blur of claws and fur.

Dennis W Donohue | Shutterstock.com

ESCAPING Predators

Having a long leap helps prey avoid snack attacks.

Flex Before You Leap

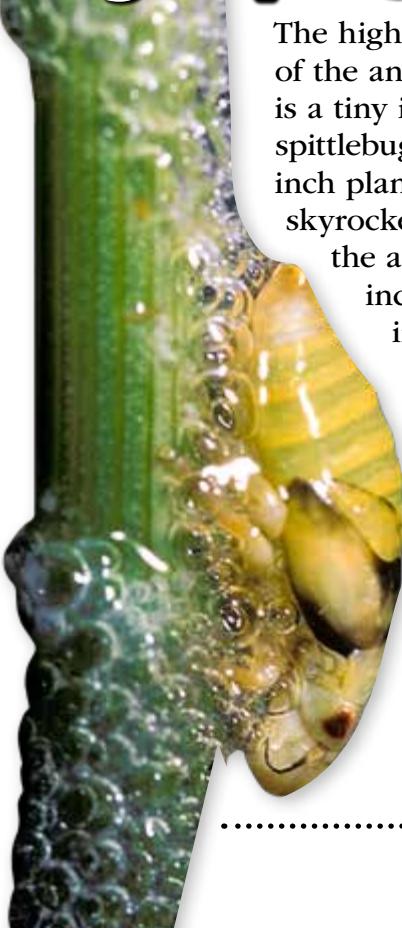
To escape hungry birds, a grasshopper can fling forward nearly 3 feet in a single, startling hop. To prepare for such a jump, the insect flexes beefy muscles in its big back legs. This draws the legs inward. The hopper's knees act like a spring, storing up all the energy. When the hopper relaxes its muscles, the legs spring out, launching the insect into the air.



© Dalton, Stephen / Animals Animals / Earth Scenes

King of Spring

The high-jump champion of the animal kingdom is a tiny insect called a spittlebug. These quarter-inch plant munchers can skyrocket 27 inches into the air. Though a few inches doesn't sound impressive, consider this: A human-sized spittlebug could easily hop over a 60-story skyscraper! And at takeoff, the bug's body feels a force of about 400 times that of gravity — something no human could ever survive.



Oh, Snap!

The big black spots on a click beetle aren't its eyes. They're markings designed to scare away predators. But if the fake eyes fail to work, the beetle tries another trick. It bends its body into a "U" then straightens out suddenly with a loud CLICK! This flips the insect into the air and startles any critter that was hoping for a beetle bonbon.

Other REASONS

Leap of Faith

Whee! Mama wood ducks lay their eggs in holes high up in trees. About a day after they hatch, the baby ducklings follow mom to the front door of the treehouse and bail out. The little fluff balls can fall more than 250 feet onto hard ground without being injured.

Animals leap for many reasons. Some do it to attract a mate. Others do it to leave a nest.





Fintastic Jumper

Beware of flying fish! Silver carp can leap over 10 feet out of the water when they're startled by a predator or a boat's motor. The heavy fish, which are native to Asia but have invaded Missouri's waterways, can injure anglers and even knock people overboard.



Rabbit Rumble

Cute and cuddly doesn't cut it for female cottontails. They want brawny boyfriends. To show how tough they are, male rabbits punch and bite each other. Often, one of the flop-eared fighters will leap high into the air and try to kick his opponent as he sails overhead. The rabbit that loses stays lonesome. The winner gets the girl.



THE STRUGGLE TO SURVIVE ISN'T ALWAYS A FAIR FIGHT

THIS ISSUE:

SHORT-TAILED SHREW VS. WHITE-FOOTED MOUSE

Illustrated by
David Besenger

Big on Venom

If the shrew lands a bite, its venom can paralyze the larger mouse.

Burning Hunger

To keep from starving, the over-amped little shrew must eat three times its body weight each day. No wonder it's so fierce!

Escape Velocity

The mouse can run 8 feet per second and leap to escape a predator.

AND THE WINNER IS...

It may be venomous, but the shrew has poor eyesight and a lousy sense of smell. The mouse dodges the shrew's attack and leaps to safety. The mouse wins.

STRANGE but TRUE!

YOUR GUIDE TO ALL THE
UNUSUAL, UNIQUE,
AND UNBELIEVABLE
STUFF THAT GOES ON IN NATURE

Gulls aren't found only at the beach. **RING-BILLED GULLS** are often spotted at large lakes and rivers throughout Missouri. They even turn up at city dumps and supermarket parking lots looking for scraps of food.



Unlike other deer, **ELK** have two canine teeth called ivories. The thumb-sized chompers are made of the same stuff as elephant and walrus tusks. Scientists think prehistoric elk used longer, saberlike tusks for fighting.



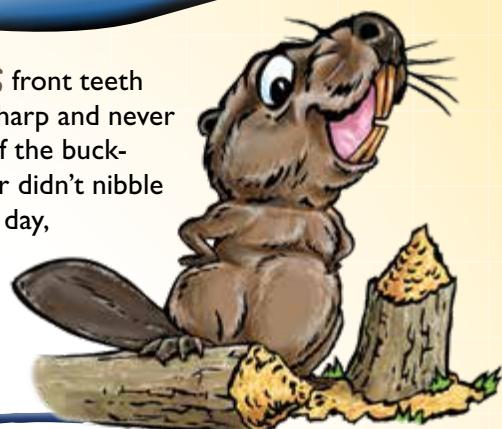
The bright yellow dots on a **SPOTTED SALAMANDER** are a warning to would-be predators. When threatened, the candy-bar-sized amphibian releases a milky poison from its skin that makes it taste terrible.



Slithery slumber party: **EASTERN GARTERSNAKES** often crowd together in the same winter den. One crevice in Canada is known to contain tens of thousands of resting reptiles tangled together in a space the size of your living room.



A **BEAVER'S** front teeth are chainsaw-sharp and never stop growing. If the buck-toothed builder didn't nibble on trees every day, its chompers would soon grow too long for its head.



In the fall, a **BLACK-CAPPED CHICKADEE** stashes seeds in hundreds of hiding spots. While doing so, its brain actually grows bigger. Its noggin stays oversized all winter to help the hungry bird find food. Then it shrinks back down to normal size in the spring.



Snow brrrrds: **COMMON REDPOLLS** sometimes tunnel under the snow to stay warm on chilly winter nights. By doing so, these tough northern finches can survive temperatures of 65 degrees below zero.



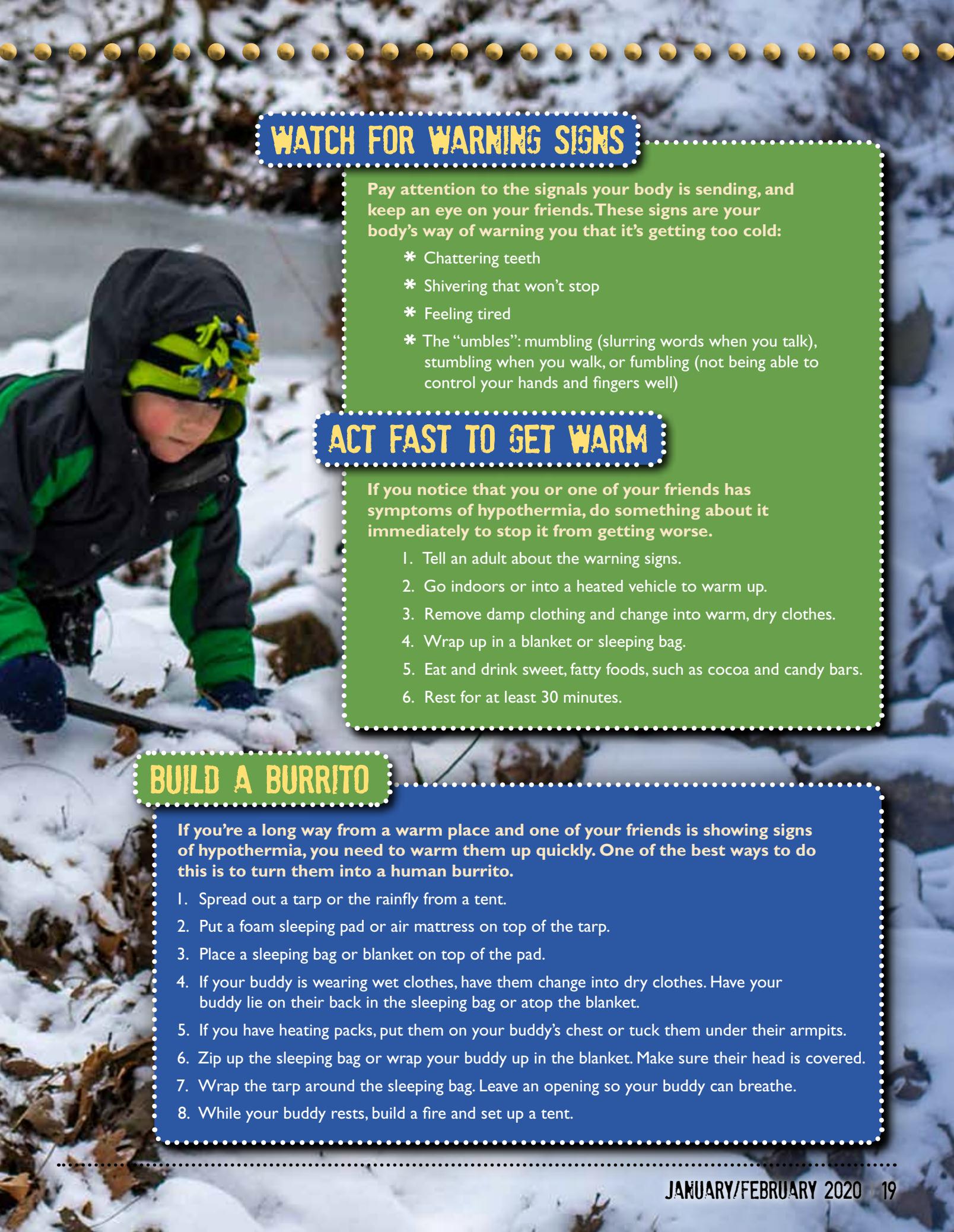
HOW TO

Stay Safe in Cold Weather

When you're having fun in the snow, it's easy to forget about chilly weather. But letting your body get too cold can make you feel crummy and even be dangerous.



Hypothermia
(high-poe-thur-mee-ah) happens when your body loses heat faster than it can make it. If this goes on too long, it can cause your temperature to drop below normal and your heart, brain, and other organs to work poorly.



WATCH FOR WARNING SIGNS

Pay attention to the signals your body is sending, and keep an eye on your friends. These signs are your body's way of warning you that it's getting too cold:

- * Chattering teeth
- * Shivering that won't stop
- * Feeling tired
- * The "umbles": mumbling (slurring words when you talk), stumbling when you walk, or fumbling (not being able to control your hands and fingers well)

ACT FAST TO GET WARM

If you notice that you or one of your friends has symptoms of hypothermia, do something about it immediately to stop it from getting worse.

1. Tell an adult about the warning signs.
2. Go indoors or into a heated vehicle to warm up.
3. Remove damp clothing and change into warm, dry clothes.
4. Wrap up in a blanket or sleeping bag.
5. Eat and drink sweet, fatty foods, such as cocoa and candy bars.
6. Rest for at least 30 minutes.

BUILD A BURRITO

If you're a long way from a warm place and one of your friends is showing signs of hypothermia, you need to warm them up quickly. One of the best ways to do this is to turn them into a human burrito.

1. Spread out a tarp or the rainfly from a tent.
2. Put a foam sleeping pad or air mattress on top of the tarp.
3. Place a sleeping bag or blanket on top of the pad.
4. If your buddy is wearing wet clothes, have them change into dry clothes. Have your buddy lie on their back in the sleeping bag or atop the blanket.
5. If you have heating packs, put them on your buddy's chest or tuck them under their armpits.
6. Zip up the sleeping bag or wrap your buddy up in the blanket. Make sure their head is covered.
7. Wrap the tarp around the sleeping bag. Leave an opening so your buddy can breathe.
8. While your buddy rests, build a fire and set up a tent.

XPLOR MORE



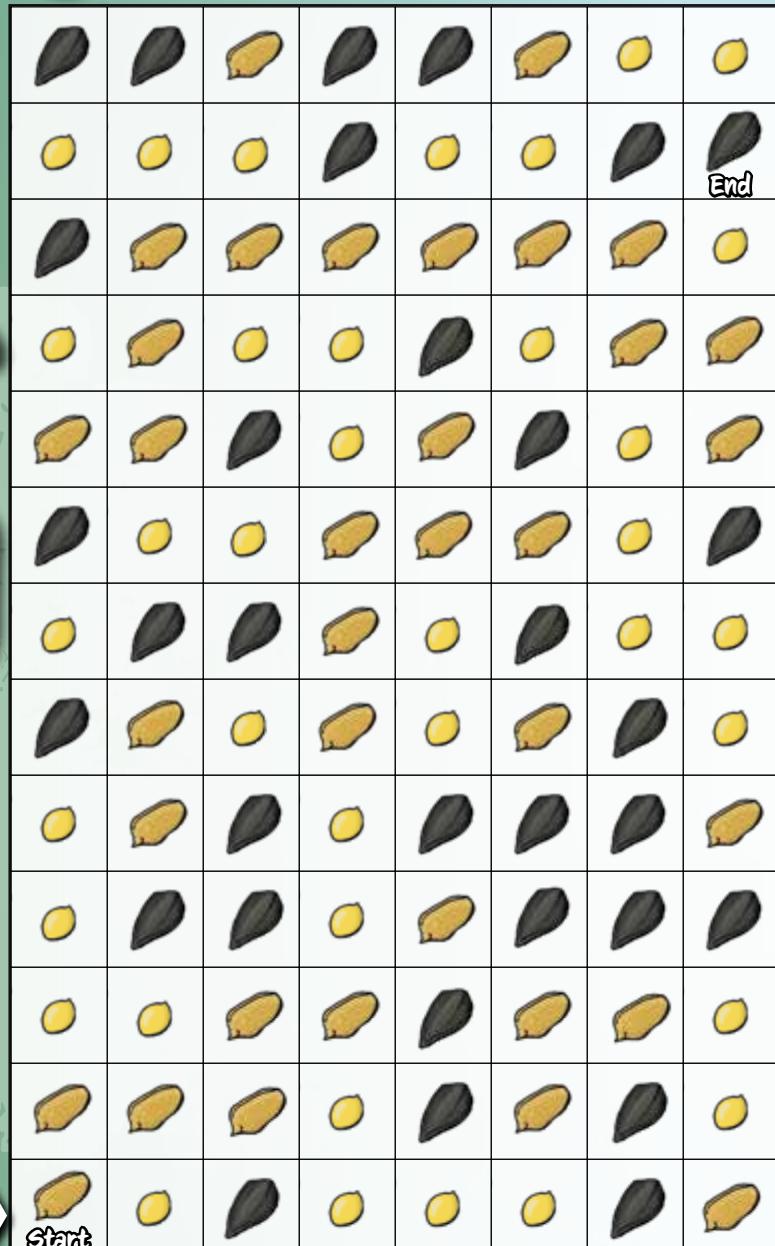
Feeder Frenzy

INSTRUCTIONS

This cardinal is a picky eater! It only eats peanuts, millet, and sunflower seeds. And it always eats them in this order:



Can you help the hungry bird eat its way across this bird feeder? You can move up, down, left, and right, but not diagonally.



WHAT IS IT?

— FROM PAGE 3 —

members. In summer, otters catch and eat lots of water critters, including crayfish, turtles, and mussels. In winter, otters eat mainly fish. Baby otters are born in February or March. Learn more at mdc.mo.gov/field-guide.

The American river otter is playful and fun to watch, especially in winter. Thick, oily fur and heavy layers of fat keep the otter warm, even underwater. Otters hunt mostly at night, usually with family



RE.....



Happy Birthday to Us!

xplor turns
10 years old in
February. Wahoo!

To celebrate, we're asking readers to tell
us what they think about the magazine.

If you'd like to give us the best birthday present
ever, grab an adult and share your opinions at:

mdc.mo.gov/myxplor

**United States Postal Service Statement of
Ownership, Management, and Circulation**

(PS form 3526, July 2014)

Published annually in the January edition of this
magazine as required by the United States Postal
Service.

- 1) Publication Title: Xplor
- 2) Publication Number: 2151-8351
- 3) Filing Date: 9/26/19
- 4) Issue Frequency: Bimonthly
- 5) Number of Issues Published Annually: Six
- 6) Annual Subscription Price: Free In-State
- 7) Complete Mailing Address of Known Office of Publication:
Missouri Department of Conservation; PO Box 180; Jefferson
City, MO 65102-0180; Contact Person: Tony Samson; Telephone:
573-522-4115
- 8) Complete Mailing Address of Headquarters or General
Business Office of Publisher: Same as above
- 9) Full Names and Complete Mailing Addresses of Publisher,
Editor, and Managing Editor: Publisher: Missouri Department
Of Conservation; PO Box 180; Jefferson City, MO 65102-0180;
Editor: Matt Seek; PO Box 180; Jefferson City, MO 65102-0180;
Managing Editor: Angela Morfeld; PO Box 180; Jefferson City,
MO, 65102-0180
- 10) Owner: Missouri Department Of Conservation; PO Box 180;
Jefferson City, MO 65102-0180
- 11) Known Bondholders, Mortgagors, and Other Security
Holders Owning or Holding 1 Percent or More of Total Amount
of Bonds, Mortgages, or Other Securities: None
- 12) Tax Status: The purpose, function, and nonprofit status of
this organization and the exempt status for federal income
tax purposes has not changed during preceding 12 months.
- 14) Issue Date for Circulation Data Below: September 2019
- 15) Extent and Nature of Circulation
 - a. Total Number of Copies (Net press run): 341,858
 - b. Paid Circulation (By Mail and Outside the Mail):
 - (1) Mailed Outside-County Paid Subscriptions
Stated on PS Form 3541: 0
 - (2) Mailed In-County Paid Subscriptions
Stated on PS Form 3541: 0
 - (3) Paid Distribution Outside the Mails Including
Sales Through Dealers and Carriers, Street Vendors,
Counter Sales, and Other Paid Distribution
Outside USPS: 1,961
 - (4) Paid Distribution by Other Classes of Mail
Through the USPS: 1,961
 - c. Total Paid Distribution: 1,961
 - d. Free or Nominal Rate Distribution
(By Mail and Outside the Mail):
 - (1) Free or Nominal Rate Outside-County
Copies Included on PS Form 3541: 210,850
 - (2) Free or Nominal Rate In-County Copies
Included on PS Form 3541: 0
 - (3) Free or Nominal Rate Copies Mailed
at Other Classes Through the USPS: 0
 - (4) Free or Nominal Rate Distribution
Outside the Mail (Carriers or other means): 0
 - e. Total Free or Nominal Rate Distribution: 210,850
 - f. Total Distribution: 212,811
 - g. Copies not Distributed: 3,000
 - h. Total: 215,811
 - i. Percent Paid: 1%
- 16) Electronic Copy Circulation
 - a. Paid Electronic Copies: 0
 - b. Total Paid Print Copies: 1,961
 - c. Total Print Distribution: 212,811
 - d. Percent Paid 1%
- 18) Signature and Title of Editor, Publisher, Business Manager,
or Owner: I certify that all information furnished on this form
is true and complete. Tony Samson, Distribution Manager,
9/26/19

SUBSCRIBE ONLINE

mdc.mo.gov/xplor

FREE TO MISSOURI HOUSEHOLDS

~~FLOWER~~
~~CRITTER~~ CORNER

Ozark Witch-Hazel



Not much blooms in January, but even if there's snow on the ground, the fragrant, yellow buds of witch-hazel may be popping open. Look (and sniff) for this woody shrub along rocky streams or in your local park. Lots of people like to plant witch-hazel for its sweet-smelling, early-blooming flowers and golden fall leaves. Deer will eat the leaves of witch-hazel, and turkeys will eat the seeds and flowers. Learn more at mdc.mo.gov/field-guide.